

Application No. 09/774,926  
Amendment and Restriction Requirement dated January 20, 2005  
Reply to Office Action of December 20, 2004

Please amend the above-identified application as follows:

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Original) A solid-state image-sensing device comprising:
  - a plurality of pixels arranged in a matrix and each generating an electric signal proportional to an amount of incident light;
  - a plurality of selector circuits provided one for each column of the matrix of the pixels and each having a single buffer, the selector circuits each receiving, from a plurality of pixels belonging to a corresponding column of the matrix, image signals and noise signals representing variations in sensitivity and then outputting the image signals and the noise signals alternately through the single buffer; and
  - a correction circuit receiving the image signals and the noise signals sequentially from one selector circuit after another and correcting the image signals on a basis of the noise signals.
2. (Original) A solid-state image-sensing device as claimed in claim 1, further comprising:
  - a plurality of constant-current sources provided one for each column of the matrix and each supplying a constant current to pixels belonging to a corresponding column of the matrix.
3. (Original) A solid-state image-sensing device as claimed in claim 1, wherein the selector circuits each comprise:
  - a first holding circuit for sampling and holding the image signals output from the pixels; and

a second holding circuit for sampling and holding the noise signals output from the pixels;

wherein, in each selector circuit, the image signals and the noise signals are first sampled and held in the first and second holding circuits respectively, and are then alternately fed through the single buffer to the correction circuit.

4. (Original) A solid-state image-sensing device as claimed in claim 3, wherein the correction circuit comprises:

a third holding circuit for sampling and holding the image signals output from the first holding circuits provided in the selector circuits;

a fourth holding circuit for sampling and holding the noise signals output from the second holding circuits provided in the selector circuits; and

a differential amplifier for outputting the image signals after correcting the image signals by subtracting the noise signals output from the fourth holding circuit from the image signals output from the third holding circuit.

5. (Withdrawn) A solid-state image-sensing device as claimed in claim 1, wherein the electric signal output from each pixel is linearly proportional to the amount of incident light.

6. (Original) A solid-state image-sensing device as claimed in claim 1, wherein the electric signal output from each pixel is natural-logarithmically proportional to the amount of incident light.

7. (Withdrawn) A solid-state image-sensing device comprising:

a plurality of pixels arranged in a matrix and each having a constant-current source, the pixels each outputting an electric signal amplified according to an amount of incident light on a basis of a current supplied from the constant-current source.

8. (Withdrawn) A solid-state image-sensing device as claimed in claim 7, wherein the pixels each further comprise:

a photoelectric converter generating an electric signal proportional to the amount of incident light and having a switch circuit determining timing with which the electric signal is output,

wherein the constant-current source is connected on a downstream side of the switch circuit with respect to an output direction of the electric signal.

9. (Withdrawn) A solid-state image-sensing device as claimed in claim 7, wherein the pixels each further comprise:

a photoelectric converter generating an electric signal proportional to the amount of incident light and having a switch circuit determining timing with which the electric signal is output,

wherein the constant-current source is connected on an upstream side of the switch circuit with respect to an output direction of the electric signal.

10. (Withdrawn) A solid-state image-sensing device as claimed in claim 7, wherein the electric signal output from each pixel is linearly proportional to the amount of incident light.

11. (Withdrawn) A solid-state image-sensing device as claimed in claim 7, wherein the electric signal output from each pixel is natural-logarithmically proportional to the amount of incident light.

12. (Withdrawn) A solid-state image-sensing device as claimed in claim 7, wherein the constant-current source has a MOS transistor fed with direct-current voltages individually at a gate electrode and a second electrode thereof.

13. (Withdrawn) A solid-state image-sensing device comprising:  
a plurality of pixels arranged in a matrix and each generating an output signal proportional to an amount of incident light;  
a plurality of integrator circuits provided one for each column of the matrix of the pixels and each integrating and then outputting output currents from pixels belonging to a

corresponding column of the matrix; and

a plurality of resetting circuits provided one for each integrator circuit and each resetting a corresponding integrator circuit.

14. (Withdrawn) A solid-state image-sensing device as claimed in claim 13, wherein the integrator circuits each comprise:

two capacitors to which image signals and noise signals representing variations in sensitivity are fed from pixels belonging to a corresponding column of the matrix,

wherein the resetting circuits each comprise:

two switches for resetting the two capacitors.

15. (Withdrawn) A solid-state image-sensing device as claimed in claim 14, further comprising:

a correction circuit receiving the image signals and the noise signals output from the plurality of integrator circuits and correcting the image signals on a basis of the noise signals,

wherein the integrator circuits each further comprise a single buffer and both the image signals and the noise signals integrated by each integrator circuit are fed through the single buffer to the correction circuit.

16. (Withdrawn) A solid-state image-sensing device as claimed in claim 13, wherein the electric signal output from each pixel is linearly proportional to the amount of incident light.

17. (Withdrawn) A solid-state image-sensing device as claimed in claim 13, wherein the electric signal output from each pixel is natural-logarithmically proportional to the amount of incident light.